VOLKSWAGEN

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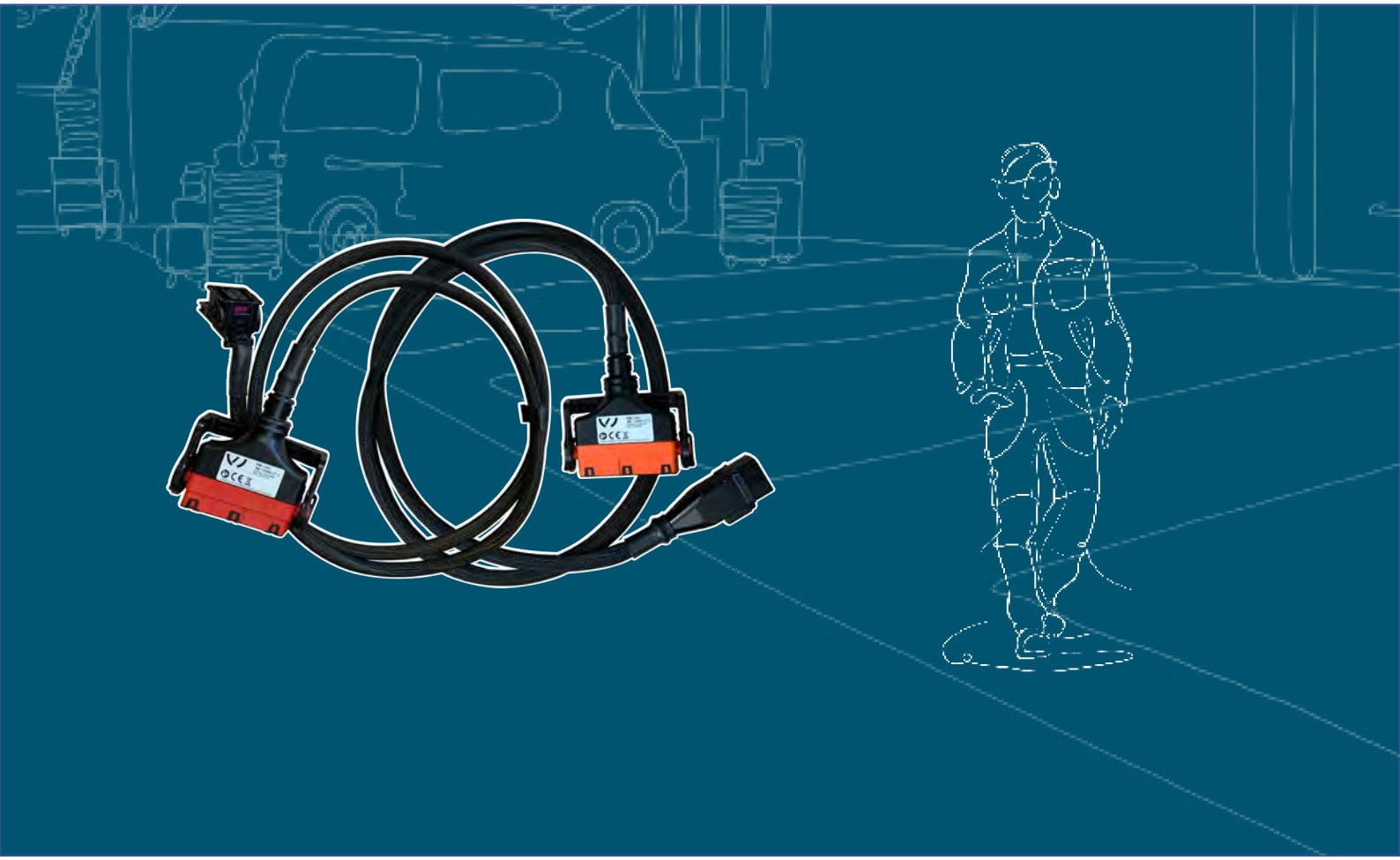

# Operating manual

## Adapter cable set VAS 6606/27

| Revision | Date | Reason |
|---|---|---|
| **V00** | 10.03.2021 | First edition |
| **V01** | 17.03.2021 | Complete revision |
| **V02** | 17.12.2021 | Transfer to Stodia |
| | | |
| | | |
| | | |

## Legal notice

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# Preliminary information

Read through this operating manual carefully before using the product.

The product is delivered with a USB stick containing the operating manual in various languages. You can find the current version and additional languages on our homepage.

The operating manual is an essential part of the product and must be kept together with the product. If you sell or transfer ownership of the product, the operating manual must be handed over to the new operator.

In addition to this operating manual, you must observe all relevant regulations for diagnostics or troubleshooting of intrinsically safe high-voltage systems in road vehicles. This includes but is not limited to: instructions for the vehicle manufacturer's diagnostics systems, company-specific safety requirements and the state of the art for working with high-voltage systems.

# Validity of the declaration of conformity

The declaration of conformity applies to the product described in the operating manual. Any changes, modifications or extensions shall void the declaration of conformity and the risk assessment.

# Manufacturer specifications

Since its founding, our company has focused on groundbreaking solutions for electromobility. Stodia GmbH develops and produces custom solutions for the automotive industry, the energy storage sector, repair shops and special vehicle fleets.

Our core products are innovative electrical storage systems, both stationary and mobile, which are essential technologies for advancing the energy revolution and energy autonomy. Stodia's portfolio also includes smart charging and battery technology, diagnostic systems, battery and cell management, and vehicle-wide measurement and diagnostic technology.

With experience in both software and hardware development, Stodia GmbH is your dependable partner at every production stage, from prototyping to series production.

This safety chapter provides information about the following:

- The warning levels contained in this operating manual
- Important safety instructions for the product
- Intended use of the product
- Requirements for the target group
- Duties of the operator

This operating manual is only valid for the following product:

| | |
|---|---|
| Item number | 22103043 |
| Designation | Adapter cable set VAS 6606/27 |

# Warning levels

This chapter provides information about the warning levels used in this operating manual.

**DANGER**

Failure to observe the safety instructions WILL result in death or serious injury!

**WARNING**

Failure to observe with the safety instructions CAN result in death or serious injury!

**CAUTION**

Failure to observe the safety instructions CAN result in minor physical injury!

# Important safety instructions

This chapter contains the safety instructions that must be observed when handling the product.

**DANGER**

**Danger of fatal electric shock!**

The electrical voltage in other systems is lethal and will cause death by electric shock!

- Do not use the product for measurements on utility power circuits!
- Never attempt to power other devices with the product!

**WARNING**

**Danger of fatal electric shock!**

The electrical voltage in high-voltage systems is lethal and can cause death by electric shock!

Liquids, condensation and high humidity can cause short circuits!

- Do not let the product come into contact with liquids!
- Use the product only in dry and enclosed spaces!

**WARNING**

**Danger of fatal electric shock!**

The electrical voltage in the product is dangerous and can cause serious injury or death from electric shock!

Defective and damaged products cannot guarantee protection against electrical voltage!

- Do not let the product come into contact with chemicals!
- Replace a defective or damaged product immediately!
- Never attempt to repair or tamper with the product!

# Intended use

The product consists of the following adapter cables:

- VAS 6606/27-1
- VAS 6606/27-2

The adapter cables allow you to connect both sides and all pins of the MEB traction battery's low-voltage plug connection to the VAS 6606 isolator box. Laboratory safety sockets on the isolator box connect the attached cables to outside applications.

The VAS 6606/27-1 adapter cable is used to connect the low-voltage plug directly to the MEB traction battery.

The VAS 6606/27-2 adapter cable is used to connect the low-voltage plug to the port on the vehicle for the MEB traction battery.

The adapter cables are not used to test that the circuit is de-energized.

Use only the plug connections on the vehicle that the manufacturer has specified in the guided fault finding.

In this operating manual, vehicle manufacturers are exclusively defined as vehicle manufacturers in the Volkswagen Group.

Any use beyond what is listed here is prohibited.

# Requirements for the target group

Only qualified personnel may work with this product!

In this operating manual, qualified personnel is defined as personnel meeting all requirements for working on high-voltage systems applicable in the country of operation, as defined by:

- Regulations applicable in the country of operation
- Qualification according to DGUV 200-005 level 2 or higher, or equivalent
- Specifications from the vehicle manufacturer and/or the operator.

At all times while using the product, staff must wear the personal protective equipment prescribed by the vehicle manufacturer for work on high-voltage systems.

# Duties of the operator

The operator is responsible for ensuring that all staff working with the adapter cable fulfills the requirements for the target group.

Furthermore, the operator is responsible for ensuring the following:

- The adapter cable is always in perfect working order.
- The regular inspection intervals for the adapter cable are observed and recorded.

# Scope of delivery

Immediately check the condition of the product and the completeness of the delivery. If anything is missing or defective, please contact the manufacturer immediately.

(1) Adapter cable VAS 6606/27-1

(2) Adapter cable VAS 6606/27-2

(3) USB stick with operating manual

# Design

## VAS 6606/27-1

Product design:

(1) Low-voltage plug for MEB battery

(2) Plug for isolator box

## VAS 6606/27-2

Product design:

(1) Low-voltage plug for the MEB traction battery port on the vehicle

(2) Plug for isolator box

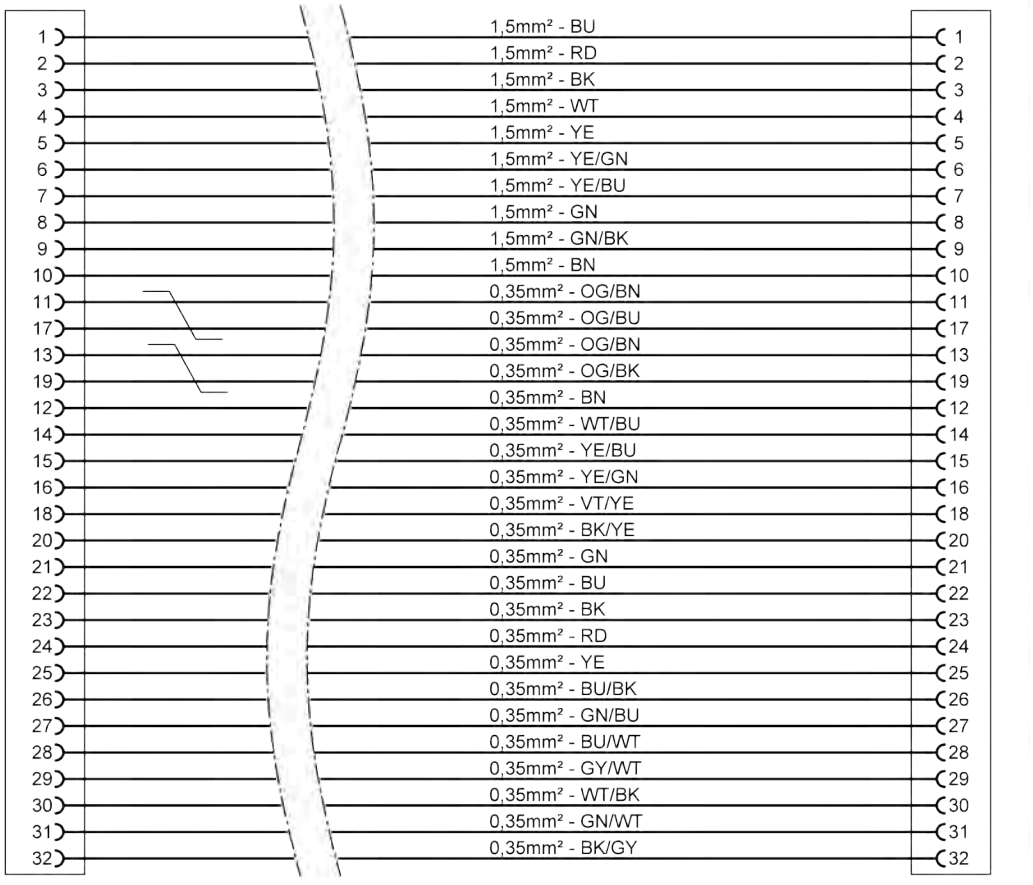
# Symbols and connections

The following symbols are shown on the product:

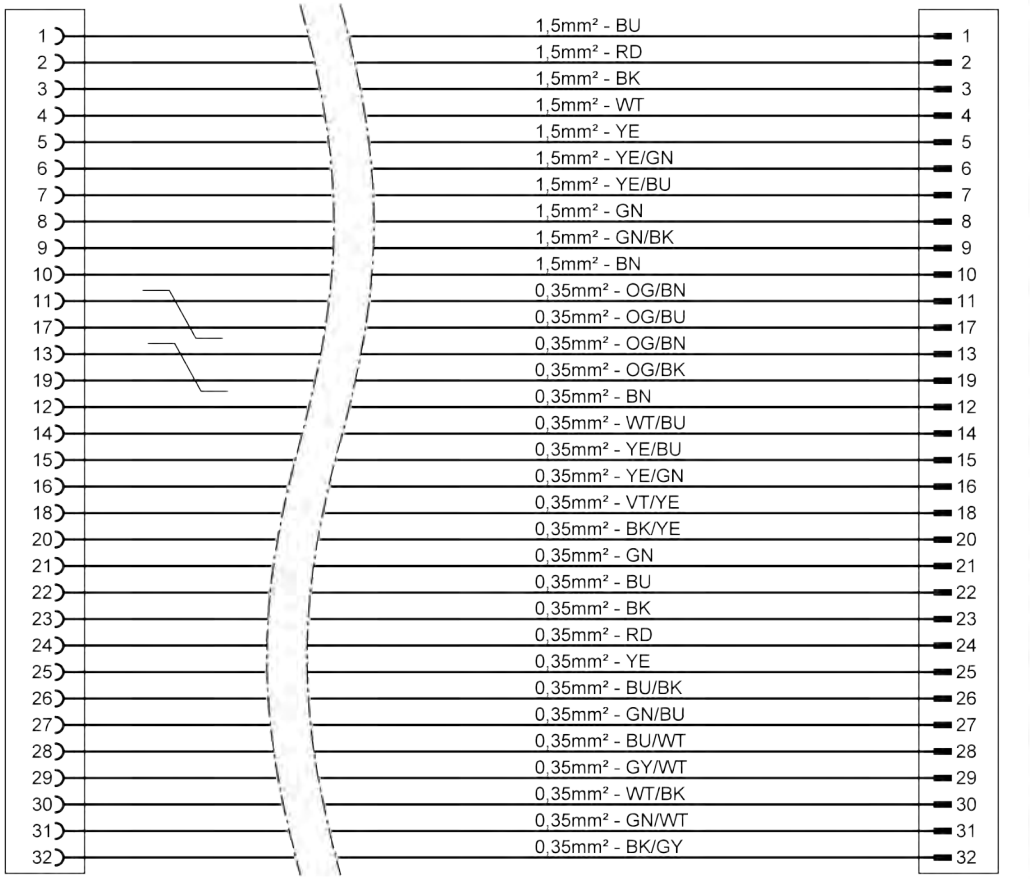
| Symbol | Meaning |
|---|---|
| | Observe the operating manual! |
| P/N | The manufacturer part number is used in conjunction with the serial number to identify the product. |
| SN: | The serial number is used in conjunction with the manufacturer part number to identify the product. |
| | The disposal instructions prohibit disposal of the product with household waste. Always dispose of the product in accordance with all local disposal regulations. |
| CE | The CE marking certifies that the product complies with all applicable European regulations and has been subjected to the prescribed conformity assessment procedure. |
| | The test seal identifies the product as having been approved for use in workshops and production facilities belonging to the vehicle manufacturer. |

# Wiring diagram

## VAS 6606/27-1



## VAS 6606/27-2


1 1,5mm² - BU 1
2 1,5mm² - RD 2
3 1,5mm² - BK 3
4 1,5mm² - WT 4
5 1,5mm² - YE 5
6 1,5mm² - YE/GN 6
7 1,5mm² - YE/BU 7
8 1,5mm² - GN 8
9 1,5mm² - GN/BK 9
10 1,5mm² - BN 10
11 0,35mm² - OG/BN 11
17 0,35mm² - OG/BU 17
13 0,35mm² - OG/BN 13
19 0,35mm² - OG/BK 19
12 0,35mm² - BN 12
14 0,35mm² - WT/BU 14
15 0,35mm² - YE/BU 15
16 0,35mm² - YE/GN 16
18 0,35mm² - VT/YE 18
20 0,35mm² - BK/YE 20
21 0,35mm² - GN 21
22 0,35mm² - BU 22
23 0,35mm² - BK 23
24 0,35mm² - RD 24
25 0,35mm² - YE 25
26 0,35mm² - BU/BK 26
27 0,35mm² - GN/BU 27
28 0,35mm² - BU/WT 28
29 0,35mm² - GY/WT 29
30 0,35mm² - WT/BK 30
31 0,35mm² - GN/WT 31
32 0,35mm² - BK/GY 32

# Technical data

## VAS 6606/27-1

| Rated data | Values |
|---|---|
| Manufacturer number | 22102721 |
| Maximum rated voltage | DC 60 V |
| Maximum rated current | 1000 mA |
| Weight | ~ 740 g |
| Total length | 2000 mm |

## VAS 6606/27-2

| Rated data | Values |
|---|---|
| Manufacturer number | 22102740 |
| Maximum rated voltage | DC 60 V |
| Maximum rated current | 1000 mA |
| Weight | ~ 760 g |
| Total length | 2000 mm |

## Ambient conditions

| Ambient conditions | Operation | Storage | Transportation |
|---|---|---|---|
| Temperature | 5°C to 40°C | -20°C to 60°C | -20°C to 60°C |
| Elevation above sea level | Max. 2000 m | No limitation. | |
| Humidity | Max. 80% up to 31°C, decreasing linearly to 50% at 40°C | Max. 85% | |
| | Condensation not permitted. Maximum permissible relative humidity: 60% in environments with corrosive gas/air. | | |

This chapter provides information about the following activities:

- Startup
- Detaching the plug connection
- Cleaning
- Storage
- Disposal
- Maintenance

**CAUTION**

**Danger of electric shock!**

The electrical voltage in the product is dangerous and can cause mild injury from electric shock!

- Use the product only for the applications intended by the vehicle manufacturer!

**CAUTION**

**Risk of damage!**

Plug connections lock into place when attached.

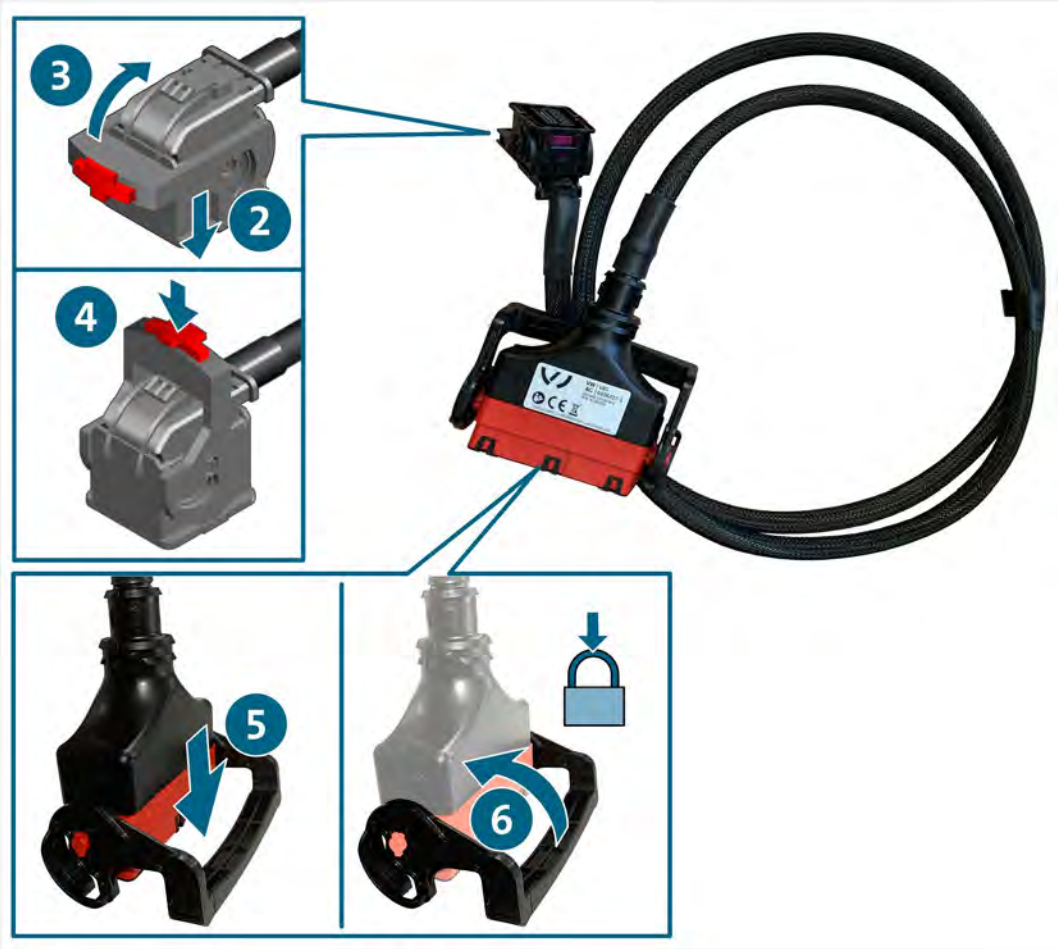
- Unlock the plug connections before you detach them! (See chapter “Detaching the plug connections”)

# Startup

## VAS 6606/27-1

1. Observe the safety instructions.

2. Connect the plug to the disconnected socket of the traction battery you want to test.
3. Fold the locking mechanism up until it clicks into place. This pulls the plug into the plug connection.
4. Press the lock button in (not required).
5. Connect the plug for the isolator box to the appropriate slot on the VAS 6606 isolator box.
6. Push the lever up. This pulls the plug into the plug connection.




✓ You can now perform measurements in accordance with the guided fault finding.

## VAS 6606/27-2

1. Observe the safety instructions.

2. Connect the plug to the disconnected socket for the MEB traction battery on the vehicle.
3. Connect the plug for the isolator box to the appropriate slot on the VAS 6606 isolator box.
4. Push the lever up. This pulls the plug into the plug connection.

✓ You can now perform measurements in accordance with the guided fault finding.

# Detaching the plug connections

## Detaching the isolator box plug (66-pin)

The plug connection has a locking mechanism. To release the plug connection:

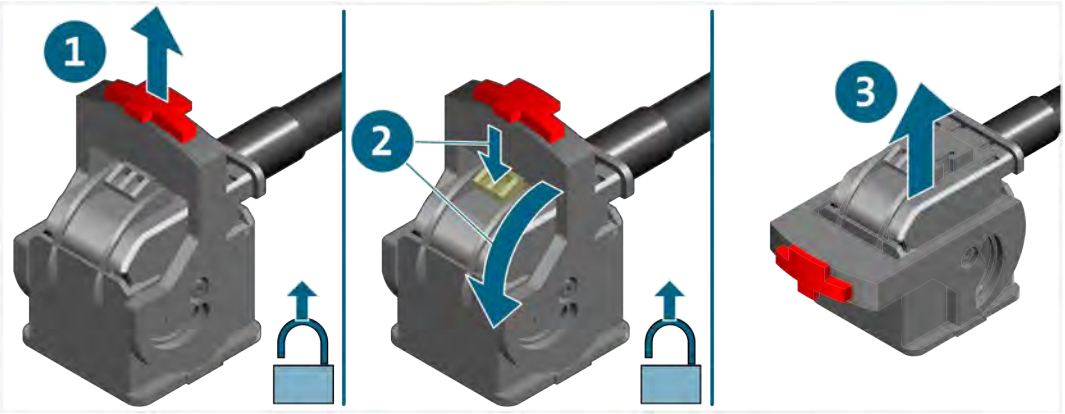
1. Push the lever down. This releases the plug connection.
2. Pull the plug connection apart.

✓ The plug connection is now detached.

## Detaching the plug connection for the diagnostic cable (32-pin)

The plug connections have a locking mechanism. To detach a plug connection:

1. Pull out the lock button.
2. Press down the latch and fold down the locking mechanism until it clicks into place. This releases the plug from the plug connection.
3. Pull the plug connection apart.




✓ The plug connection is now detached.

# Cleaning

**WARNING**

**Danger of electric shock!**

The electrical voltage in the product is dangerous and can cause death by electric shock!

- Disconnect the product from all power sources before cleaning the product!

Observe the safety instructions!

Use only a dry cloth to clean the product.

# Storage

Store the product in a dry and dust-free location when not in use.

# Disposal

Observe the safety instructions!

Always dispose of the product in accordance with all local disposal regulations.

# Maintenance

Observe the safety instructions!

National and local requirements for regular testing must be observed!

Test the product for proper function at intervals of no more than 24 months.

Contact the manufacturer to have a professional function test performed.

# Warranty

Stodia GmbH grants a warranty period of 24 months from the date of purchase. The warranty is valid for demonstrable defects in functional material and workmanship.

Further information on the warranty conditions can be found in the terms and conditions on the manufacturer's website.

# Customer service

Always include the item number and, if available, the serial number with any product queries. Both numbers are found on the product.

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Edition 12/2021